

## PCT INTERNATIONAL COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

HOFMAN-BANG A/S  
Hans Bekkevolds Allé 7  
DK-2900 Hellerup  
DANEMARK

Date of mailing (day/month/year) 08 September 2000 (08.09.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference P199901527 WO	
International application No. PCT/DK99/00637	International filing date (day/month/year) 19 November 1999 (19.11.99)

## 1. The following indications appeared on record concerning:



the applicant



the inventor



the agent



the common representative

## Name and Address

BOLOURI-SARANSAR, Masud  
Skovkanten 46  
DK-2850 Nærum  
Denmark

## State of Nationality

DK

## State of Residence

DK

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:



the person



the name



the address



the nationality



the residence

## Name and Address

BOLOURI-SARANSAR, Masud  
Malmbjergsvej 17, st.th.  
DK-2850 Nærum  
Denmark

## State of Nationality

DK

## State of Residence

DK

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:



the receiving Office



the International Searching Authority



the International Preliminary Examining Authority



the designated Offices concerned



the elected Offices concerned



other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

C. Cupello

Telephone No.: (41-22) 338.83.38

PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only *SHA/MCR*

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference **P199901527 WO**  
(if desired) (12 characters maximum)

**Box No. I TITLE OF INVENTION** A method for the distribution and transfer of communication and multimedia signals, as well as a signal distribution arrangement for the transfer of the communication and multimedia signals

**Box No. II APPLICANT**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

LK A/S  
Industriparken 32  
DK-2750 Ballerup  
Denmark

☐ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State (that is, country) of nationality:

DK Denmark

State (that is, country) of residence:

DK Denmark

This person is applicant for the purposes of:

☐ all designated States☒ all designated States except the United States of America☐ the United States of America only☐ the States indicated in the Supplemental Box**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

BOLOURI-SARANSAR, Masud  
Skovkanten 46  
DK-2850 Nærum  
Denmark

This person is:

☐ applicant only☒ applicant and inventor☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

DK Denmark

State (that is, country) of residence:

DK Denmark

This person is applicant for the purposes of:

☐ all designated States☐ all designated States except the United States of America☒ the United States of America only☐ the States indicated in the Supplemental Box☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Hofman-Bang A/S  
Hans Bekkevolds Allé 7  
DK-2900 Hellerup  
Denmark

Telephone No.

+45 39 48 80 00

Facsimile No.

+45 39 48 80 80

Teleprinter No.

19 085 hbb dk

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

**Regional Patent**

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> <b>AE</b> United Arab Emirates                        | <input checked="" type="checkbox"/> <b>LR</b> Liberia  |
| <input checked="" type="checkbox"/> <b>AL</b> Albania .....                               | <input checked="" type="checkbox"/> <b>LS</b> Lesotho .....  |
| <input checked="" type="checkbox"/> <b>AM</b> Armenia .....                               | <input checked="" type="checkbox"/> <b>LT</b> Lithuania  |
| <input checked="" type="checkbox"/> <b>AT</b> Austria .....and Utility Model              | <input checked="" type="checkbox"/> <b>LU</b> Luxembourg   |
| <input checked="" type="checkbox"/> <b>AU</b> Australia .....                             | <input checked="" type="checkbox"/> <b>LV</b> Latvia   |
| <input checked="" type="checkbox"/> <b>AZ</b> Azerbaijan                                  | <input checked="" type="checkbox"/> <b>MD</b> Republic of Moldova .....                                      |
| <input checked="" type="checkbox"/> <b>BA</b> Bosnia and Herzegovina .....                | <input checked="" type="checkbox"/> <b>MG</b> Madagascar .....   |
| <input checked="" type="checkbox"/> <b>BB</b> Barbados                                    | <input checked="" type="checkbox"/> <b>MK</b> The former Yugoslav Republic of Macedonia ...                  |
| <input checked="" type="checkbox"/> <b>BG</b> Bulgaria .....                              |  |
| <input checked="" type="checkbox"/> <b>BR</b> Brazil .....                                | <input checked="" type="checkbox"/> <b>MN</b> Mongolia   |
| <input checked="" type="checkbox"/> <b>BY</b> Belarus .....                               | <input checked="" type="checkbox"/> <b>MW</b> Malawi .....   |
| <input checked="" type="checkbox"/> <b>CA</b> Canada                                      | <input checked="" type="checkbox"/> <b>MX</b> Mexico .....   |
| <input checked="" type="checkbox"/> <b>CH and LI</b> Switzerland and Liechtenstein        | <input checked="" type="checkbox"/> <b>NO</b> Norway   |
| <input checked="" type="checkbox"/> <b>CN</b> China .....                                 | <input checked="" type="checkbox"/> <b>NZ</b> New Zealand .....  |
| <input checked="" type="checkbox"/> <b>CU</b> Cuba .....                                  | <input checked="" type="checkbox"/> <b>PL</b> Poland .....   |
| <input checked="" type="checkbox"/> <b>CZ</b> Czech Republic .....and Utility Model       | <input checked="" type="checkbox"/> <b>PT</b> Portugal .....   |
| <input checked="" type="checkbox"/> <b>DE</b> Germany .....and Utility Model              | <input checked="" type="checkbox"/> <b>RO</b> Romania  |
| <input checked="" type="checkbox"/> <b>DK</b> Denmark .....and Utility Model              | <input checked="" type="checkbox"/> <b>RU</b> Russian Federation .....                                       |
| <input checked="" type="checkbox"/> <b>EE</b> Estonia .....and Utility Model              | <input checked="" type="checkbox"/> <b>SD</b> Sudan  |
| <input checked="" type="checkbox"/> <b>ES</b> Spain .....                                 | <input checked="" type="checkbox"/> <b>SE</b> Sweden   |
| <input checked="" type="checkbox"/> <b>FI</b> Finland .....and Utility Model              | <input checked="" type="checkbox"/> <b>SG</b> Singapore  |
| <input checked="" type="checkbox"/> <b>GB</b> United Kingdom                              | <input checked="" type="checkbox"/> <b>SI</b> Slovenia .....   |
| <input checked="" type="checkbox"/> <b>GD</b> Grenada                                     | <input checked="" type="checkbox"/> <b>SK</b> Slovakia .....and Utility Model                                |
| <input checked="" type="checkbox"/> <b>GE</b> Georgia .....                               | <input checked="" type="checkbox"/> <b>SL</b> Sierra Leone .....   |
| <input checked="" type="checkbox"/> <b>GH</b> Ghana .....                                 | <input checked="" type="checkbox"/> <b>TJ</b> Tajikistan .....   |
| <input checked="" type="checkbox"/> <b>GM</b> Gambia                                      | <input checked="" type="checkbox"/> <b>TM</b> Turkmenistan .....   |
| <input checked="" type="checkbox"/> <b>HR</b> Croatia .....                               | <input checked="" type="checkbox"/> <b>TR</b> Turkey .....   |
| <input checked="" type="checkbox"/> <b>HU</b> Hungary .....                               | <input checked="" type="checkbox"/> <b>TT</b> Trinidad and Tobago .....                                      |
| <input checked="" type="checkbox"/> <b>ID</b> Indonesia                                   | <input checked="" type="checkbox"/> <b>UA</b> Ukraine .....  |
| <input checked="" type="checkbox"/> <b>IL</b> Israel .....                                | <input checked="" type="checkbox"/> <b>UG</b> Uganda .....   |
| <input checked="" type="checkbox"/> <b>IN</b> India .....                                 | <input checked="" type="checkbox"/> <b>US</b> United States of America .....                                 |
| <input checked="" type="checkbox"/> <b>IS</b> Iceland                                     |  |
| <input checked="" type="checkbox"/> <b>JP</b> Japan .....                                 | <input checked="" type="checkbox"/> <b>UZ</b> Uzbekistan .....   |
| <input checked="" type="checkbox"/> <b>KE</b> Kenya .....                                 | <input checked="" type="checkbox"/> <b>VN</b> Viet Nam .....   |
| <input checked="" type="checkbox"/> <b>KG</b> Kyrgyzstan .....                            | <input checked="" type="checkbox"/> <b>YU</b> Yugoslavia .....   |
| <input checked="" type="checkbox"/> <b>KP</b> Democratic People's Republic of Korea ..... | <input checked="" type="checkbox"/> <b>ZA</b> South Africa .....   |
|   | <input checked="" type="checkbox"/> <b>ZW</b> Zimbabwe .....   |
| <input checked="" type="checkbox"/> <b>KR</b> Republic of Korea .....                     | Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet: |
| <input checked="" type="checkbox"/> <b>KZ</b> Kazakhstan .....                            | <input checked="" type="checkbox"/> <b>CR</b> Costa Rica .....   |
| <input checked="" type="checkbox"/> <b>LC</b> Saint Lucia                                 | <input checked="" type="checkbox"/> <b>TZ</b> Tanzania .....   |
| <input checked="" type="checkbox"/> <b>LK</b> Sri Lanka                                   | <input checked="" type="checkbox"/> <b>DM</b> Dominica .....   |
|   | <input checked="" type="checkbox"/> <b>MA</b> Morocco .....  |

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claim is indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 20.11.1998	PA 1998 01530	DK Denmark		
item (2)				
item (3)				

☐ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA/ SE

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

20.11.1998

DK98/00204

DK Denmark

## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request : 3

description (excluding sequence listing part) : 5

claims : 3

abstract : 1

drawings : 2

sequence listing part of description : \_\_\_\_\_

Total number of sheets : 14

This international application is accompanied by the item(s) marked below:

1. ☒ fee calculation sheet
2. ☐ separate signed power of attorney
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☐ nucleotide and/or amino acid sequence listing in computer readable form
9. ☒ other (specify): DK/00204

Figure of the drawings which should accompany the abstract:

6

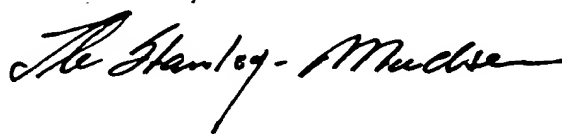
Language of filing of the international application:

Danish

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

LK A/S




Masud Bolouri-Saransar

## For receiving Office use only

1. Date of actual receipt of the purported international application: RO/DK 19 NOVEMBER 1999 (19.11.1999)	2. Drawings:  <input type="checkbox"/> received:  <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA/ SE	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

## For International Bureau use only

Date of receipt of the record copy by the International Bureau:

LKAS-PA 2026-1110

WIT 300

PCT

From the INTERNATIONAL BUREAU

**NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT**

(PCT Administrative Instructions, Section 411)

To:

HOFMAN-BANG A/S  
Hans Bekkevolds Allé 7  
DK-2900 Hellerup  
DANEMARK

RECEIVED

13 MRS. 2000

Hofman-Bang & Boutard  
Lehmann & Ree &

Date of mailing (day/month/year) 01 March 2000 (01.03.00)	
Applicant's or agent's file reference P199901527 WO	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/DK99/00637	International filing date (day/month/year) 19 November 1999 (19.11.99)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 20 November 1998 (20.11.98)
Applicant LK A/S et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
20 Nove 1998 (20.11.98)	PA 1998 01530	DK	18 Febr 2000 (18.02.00)

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No. (41-22) 740.14.35</p>	<p>Authorized officer</p> <p align="right">Marie-José Devillard</p> <p>Telephone No. (41-22) 338.83.38</p>
---	--

## PATENT COOPERATION TREATY

wntuol

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

RECEIVED

HOFMAN-BANG A/S  
Hans Bekkevolds Allé 7 18 SEP. 2000  
DK-2900 Hellerup  
DANEMARKHofman-Bang & Boutard,  
Lehmann & Ree A/S

Date of mailing (day/month/year)

08 September 2000 (08.09.00)

Applicant's or agent's file reference

P199901527 WO

## IMPORTANT NOTIFICATION

International application No.

PCT/DK99/00637

International filing date (day/month/year)

19 November 1999 (19.11.99)

1. The following indications appeared on record concerning:

☒

the applicant

☒

the inventor

☐

the agent

☐

the common representative

Name and Address

BOLOURI-SARANSAR, Masud  
Skovkanten 46  
DK-2850 Nærum  
Denmark

State of Nationality

DK

State of Residence

DK

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐

the person

☐

the name

☒

the address

☐

the nationality

☐

the residence

Name and Address

BOLOURI-SARANSAR, Masud  
Malmbjergsvej 17, st.th.  
DK-2850 Nærum  
Denmark

State of Nationality

DK

State of Residence

DK

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒

the receiving Office

☐

the designated Offices concerned

☐

the International Searching Authority

☒

the elected Offices concerned

☒

the International Preliminary Examining Authority

☐

other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

C. Cupello

*Cupello*

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

## PCT COOPERATION TREATY

WIT/UDL

PCT

INFORMATION CONCERNING ELECTED  
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

From the INTERNATIONAL BUREAU

To:

HOFMAN-BANG A/S  
Hans Bekkevolds Allé 7  
DK-2900 Hellerup  
DANEMARK

RECEIVED

15 SEP. 2000

Hofman-Bang &amp; Rasmussen

Lehmann &amp; Ree A/S

IMPORTANT INFORMATION

Date of mailing (day/month/year) 04 September 2000 (04.09.00)		
Applicant's or agent's file reference P199901527 WO		
International application No. PCT/DK99/00637	International filing date (day/month/year) 19 November 1999 (19.11.99)	Priority date (day/month/year) 20 November 1998 (20.11.98)
Applicant LK A/S et al		

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

AP : GH,GM,KE,LS,MW,SD,SL,SZ,TZ,UG,ZW

EP : AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE

National : AU,BG,BR,CA,CN,CZ,DE,IL,JP,KP,KR,MN,NO,NZ,PL,RO,RU,SE,SK,US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

EA : AM,AZ,BY,KG,KZ,MD,RU,TJ,TM

OA : BF,BJ,CF,CG,CI,CM,GA,GN,GW,ML,MR,NE,SN,TD,TG

National : AE,AL,AM,AT,AZ,BA,BB,BY,CH,CR,CU,DK,DM,EE,ES,FI,GB,GD,GE,GH,GM,  
HR,HU,ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MW,MX,PT,SD,SG,  
SI,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

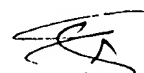
The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:

Frédéric Rotsaert



Telephone No. (41-22) 338.83.38

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P199901527 WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DK99/00637	International filing date (day/month/year) 19.11.1999	Priority date (day/month/year) 20.11.1998
International Patent Classification (IPC) or national classification and IPC7 H04M 11/08		
Applicant LK A/S et al		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>8</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 16.06.2000	Date of completion of this report 21.02.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer Stefan Hansson/js Telephone No. 08-782 25 00



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DK99/00637

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
 pages 5-6, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages 1-4a, filed with the letter of 15.01.2001
- ☒ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement) under article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages 1-3, filed with the letter of 15.01.2001
- ☒ the drawings:  
 pages 1-2, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheet/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DK99/00637

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	<u>1-11</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-11</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-11</u>	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

The claimed invention

The claimed invention relates to a method for the distribution and transfer of communication and multimedia signals. In a method and a signal distribution arrangement for use in private dwellings or offices, communication and multimedia signals are distributed by means of a connection arrangement that is connected to a plurality of terminals in the rooms of the dwelling or the office. The individual terminals are preferably identical and may be connected between the terminals and the consuming apparatus via a cable with a plug at each end that is adapted to the terminals and a consuming apparatus, respectively. The signal distribution arrangement includes a plurality of signal processing circuits that have wire connections that may be connected to a patch panel, each of which is either connected to the terminals or is prepared to be connected to the new terminals. Hereby, the power distribution may be adapted to the needs of the individual user in a simple manner at any given occasion without requiring expensive installation changes, as the various signal types may be converted from one signal type to another signal type either in the signal processing circuit or after the terminals.

The claims have been amended.

The following documents have been cited in the International Search Report

D1: US 4690491 A  
D2: US 5515037 A  
D3: US 5781728 A  
D4: EP 833425 A2  
D5: WO9719543

.../...

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DK99/00637

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V

D1 relates to building a data transmission system. D1 describes how fiber optic cables may be used in data transmission networks with the same flexibility as copper wire networks. D1 describes the use of floor junction boxes, terminal boxes, distribution frames and path cores in fiber optic networks. The work station terminals utilized in the system may be any data generating or receiving type equipment. Such terminals may be for example computers, printers, office equipment, telex equipment, industrial machinery, security systems etc. Since most data terminals are not inherently compatible with fiber optic cables, they must be attached to the cable through conventional adapters which converts their external output and input signals. Optic fiber cables connect the junction box ports to floor terminal boxes which serve a number of junction boxes. Usually one terminal box serves a floor of a building. The floor terminal boxes provide the cross communication between work station data terminals and/or central processing equipment. By cross connecting at the floor terminal box, work stations can be connected to each other or any other piece of equipment in the system. Different ports from the work station data terminals can be connected to different destinations at the floor terminal box. D1 also describes how the optic fiber cable is connected to communicate with other another cable through a patch cord. From the main terminal box the output cable goes to the main distributing frame. This frame is a larger scale terminal box and has a large number of cables terminating on its rear side. All work stations and equipment which is connected to the frame can be connected to any other workstation or piece of equipment in the building through the attachment of a patch cord to the appropriate nonadhesive connectors upon which the cables terminate.

However, the claimed invention differs from D1 in several aspects. D1 relates to a closed network where every data unit in the building can be in contact with any data unit within the same building. The claimed invention in the other hand distributes signals coming from the outside the building, said signals being of entirely different types, via a distribution installation and such that e.g. a television signal can be transmitted to those exact places within the building where a television set is to be installed.

Documents D2-D5 are considered to merely disclose the state of the art and are not commented on further.

.../...

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DK99/00637

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Box V (I)

The claimed invention differs substantially from the cited references. Consequently, the claimed invention is considered to be novel, to involve an inventive step and to have industrial applicability.

15-01-2001

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JC08 Rec'd PCT/PTO 10 MAY 2001

Amended pages:

A method for the distribution and transfer of communication and multimedia signals, as well as a signal distribution system for the transfer of the communication and multimedia signals

The invention relates to a method for the distribution and transfer of external communication and multimedia signals, preferably in private dwellings and offices with one or more rooms, wherein the distribution is provided via a central unit connected to a plurality of signal terminals from which the signals may be transferred to receiving installation equipment, and wherein the external signals comprise signals of several different types.

The invention moreover relates to a signal distribution system for the distribution and transfer of external communication and multimedia signals, preferably in private dwellings and offices with one or more rooms, said system comprising a central unit which is adapted to receive the external signals and to distribute these via a data transmission installation to a plurality of terminals in the individual rooms.

Usually, various electrical terminals are installed in private dwellings and offices for ordinary power supply for lighting, refrigerators, etc. In addition, separate terminals for radio and TV signals as well as separate terminals for telephone signals are provided. In offices in particular, there are moreover often terminals for data connections, which may also be installed via a modem to a telephone connection.

With several separate connections, many different terminals are required of course. In practice, terminals for radio, TV, data and telephone, however, have typically just been installed in one, perhaps 2 rooms. The number  
5 of this type of terminals must be expected to increase strongly in the dwellings of the future, so that all types of terminals, even in several specimens, are desired in several rooms, which will mean a very comprehensive diversified installation.

10

Main distribution frames for internal rerouting of identical type signals is generally known from e.g. US 4,690,491. The invention, however, relates to the distribution of several types of external signals via a data  
15 transmission installation which would normally not allow propagation of all the signal types which it is desired to distribute.

Accordingly, an object of the invention is to provide a  
20 method and a signal distribution system which are more flexible than before in terms of distributing a plurality of different and external signals via a common distribution network in a building.

25 The object of the invention is achieved by a method of the type stated in the introductory portion of claim 1 which is characterized in that at least one of the signals is converted such that all signals distributed by the transmission belong to a group of signal types, all  
30 of which can be transferred effectively via a data main distribution frame and via a transmission installation common to all signals which connects the main distribution frame with said terminals, and that the converted signals are converted back to their original types before

the signals are transferred to said installation equipment.

By hereby combining conversion circuits and a main distribution frame it is simple to adapt every terminal to an individual need, and all signal are propagated effectively, because of the conversion, externally and to an arbitrary terminal.

When all the terminals are identical, and plugged cable connections are inserted between the individual terminals and the consuming installation equipment, said plugged cable connections being adapted to the terminals and the consuming installation equipment, the flexibility is enhanced additionally since the number of terminals in a dwelling or an office can be reduced in future.

When separate circuits are inserted in the central unit for the conversion and transfer of data signals, radio/TV signals, telephony in the form of electrical or optical communication signals, it is ensured that all the feed units to routing installations are positioned centrally, which additionally means that it is easier to change signal type in the individual terminals for other applications.

The signal distribution system according to the invention is characterized in that the central unit comprises a plurality of signal adaptation circuits and comprises a patch panel which is connected to the signal adaptation circuit via patch cables, and which is connected to the terminals via the data transmission installation.

Such an arrangement, of course, provides the advantages which are already mentioned above.

To ensure user-friendliness and flexibility, it is an advantage that the circuits contain conversion circuits for the conversion of one signal type to another signal type, and that conversion circuits for back conversion of signals are connected or inserted in the cables between the receiving installation equipment and the terminals, respectively.

With a view to an additionally simple installation structure it is an advantage if the signal distribution system is mounted on a DIN rail, which is preferably counter-sunk.

The invention will now be explained more fully with reference to an embodiment shown in the drawing, in which

figs. 1 and 2 schematically show two rooms with terminals,

fig. 3 shows a signal distribution arrangement according to the invention,

figs. 4 and 5 show the rooms according to figs. 1 and 2 with different installations, and

fig. 6 shows an example of the electrical coupling of the signal distribution arrangement of fig. 3.

Figs. 1 and 2 schematically show two rooms with terminals 1-8. The terminals might e.g. be telephone terminals, data connection terminals, radio/TV terminals and the



4a

like, depending on the installations desired by a user. Normally, the terminals are provided as fixed installations, each terminal being intended for a task of its own.

5

Fig. 3 shows a connection arrangement 27 which is adapted for use by implementation of the principles of the invention. The board is provided with electrical adaptation circuits A - D and connection points (patch panel) 1 - 23  
10 for communication signals, whose function will be explained in connection with figs. 4 - 6 below.

Amended Claims:

1. A method for the distribution and transfer of external communication and multimedia signals, preferably in private dwellings and offices with one or more rooms, wherein the distribution is provided via a central unit connected to a plurality of signal terminals from which the signals may be transferred to receiving installation equipment, and wherein the external signals comprise signals of several different types, c h a r a c t e r - i z e d in that at least one of the signals is converted such that all signals distributed by the transmission belong to a group of signal types, all of which can be transferred effectively via a data main distribution frame and via a transmission installation common to all signals which connects the main distribution frame with said terminals, and that the converted signals are converted back to their original types before the signals are transferred to said installation equipment.

2. A method according to claim 1, c h a r a c t e r - i z e d in that patch cables are used for the signal distribution between a plurality of conversion units and a patch panel in the main distribution frame.

3. A method according to claims 1-2, c h a r a c t e r - i z e d in that signal conversion and main distribution frame connections are performed by means of components which are mounted centrally on a DIN rail, preferably a countersunk DIN rail.

4. A method according to claims 1-3, c h a r a c t e r - i z e d in that identical terminals are used, and that plugged cable connections are inserted between the indi-

vidual terminals and the consuming installation equipment, said plugged cable connections being adapted at each end to the terminals and the consuming installation equipment.

5

5. A method according to claim 1 or 2, c h a r a c -  
t e r i z e d in that separate circuits are inserted in  
the central unit for the conversion and transfer of data  
signals, radio/TV signals, or telephony in the form of  
10 electrical or optical communication signals.

6. A signal distribution system for the distribution and  
transfer of external communication and multimedia sig-  
nals, preferably in private dwellings and offices with  
15 one or more rooms, said system comprising a central unit  
which is adapted to receive the external signals and to  
distribute these via a data transmission installation to  
a plurality of terminals in the individual rooms,  
c h a r a c t e r i z e d in that the central unit com-  
20 prises a combination of at least one signal adaptation  
circuit and a patch panel, which is connected to the ter-  
minals via the data transmission installation, said sig-  
nal adaptation circuit being adapted to convert a re-  
ceived signal such that the propagation of the signal  
25 through the data transmission installation is improved.

7. A signal distribution system according to claim 6,  
c h a r a c t e r i z e d in that the terminals con-  
nected to the patch panel are preferably identical, and  
30 that the equipment connected to the terminals is con-  
nected to the terminals with a cable having plug connec-  
tions adapted to the terminals and the installation.

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PCT International Application

8. A signal distribution system according to claim 6 or 7, c h a r a c t e r i z e d in that the circuits are adapted to transfer electrical or optical data, radio/TV or telephone signals.

5

9. A signal distribution system according to claims 4-6, c h a r a c t e r i z e d in that the signal adaptation circuits contain conversion circuits for the conversion of one signal type to another signal type.

10

10. A signal distribution system according to claims 7 and 9, c h a r a c t e r i z e d in that conversion circuits for back conversion of one signal type to another signal type are connected or inserted in the cables.

15

11. A signal distribution system according to claim 6, c h a r a c t e r i z e d in that the signal adaptation circuit and the patch panel are mounted on a DIN rail, which is preferably recessed.

20